

**UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION**

Page 1 of 5

PATENT NO. : 6,514,640

APPLICATION NO.: 08/998,264

ISSUE DATE : February 4, 2002

INVENTOR(S) : Armand, et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 1, line 24

After "for use as", insert --an--.

Column 2, line 44

Before "and an electrolyte", insert --cathode-- and delete "catrode".

Column 2, line 51

After "better lithium ion", insert --diffusivity-- and delete "diffusitivity".

Column 2, line 57

Before "tetrahedra can", insert --PO₄³⁻-- and delete "PO₄".

Column 2, line 58

Before "tetrahedra.", insert --VO₄³⁻-- and delete "VO₄".

Column 3, line 23

After "on the initial", insert --P⁵⁺-- and delete "p⁵⁺".

Column 3, line 24

Before "tetrahedra", insert --SiO₄⁴⁻-- and delete "SiO₄".

Column 3, line 33

Insert --p + s + v < 1;-- and delete "P + s + v < 1;"

Column 3, line 35

Insert --3 + s - p = x - y + 2 + t + 2q + 3r-- and delete "3 + s - p = x - y + t + 2q + 3r".

Column 3, line 39

Before "and s may vary", insert --p-- and delete "r".

MAILING ADDRESS OF SENDER (Please do not use customer number below):

910 Louisiana Street
Houston, Texas 77002

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: **Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

**UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION**

Page 2 of 5

PATENT NO. : 6,514,640

APPLICATION NO.: 12/859,865

ISSUE DATE : February 4, 2002

INVENTOR(S) : Armand, et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 4, line 1

Before "The phrase", insert --described-- and delete "describe."

Column 4, line 7

Before "a vanadium oxide", insert --dichalcogenide-- and delete "dichalcognenide".

Column 4, line 43

Before "a salt, the cation", insert --contains-- and delete "contain".

Column 4, line 47

Before "or a dialkylether", insert --tetraalkylsulfamide-- and delete "tetraalkylsulfamiide".

Column 4, line 58

Before "on a transparent", insert --layered-- and delete "layed".

Column 4, line 62

Before "nanometers", insert -- 10^3 -- and delete " 10^4 ".

Column 5, line 9

After "polyethylene", insert --terephthalate-- and delete "terephatalate".

Column 6, line 17

After "gives the undesired", insert --monoclinic-- and delete "monoclinc".

Column 6, line 20

Before "and $\text{NH}_4\text{H}_2\text{PO}_4 \cdot \text{H}_2\text{O}$ ", insert -- Na_2CO_3 , $\text{Fe}(\text{CH}_3\text{COO})_2$ -- and delete " NaCO_3 , $\text{Fe}(\text{CH}_2\text{COOH})_2$ ".

MAILING ADDRESS OF SENDER (Please do not use customer number below):

910 Louisiana Street
Houston, Texas 77002

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: **Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

**UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION**

Page 3 of 5

PATENT NO. : 6,514,640

APPLICATION NO.: 12/859,865

ISSUE DATE : February 4, 2002

INVENTOR(S) : Armand, et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 6, line 54

After "formula", insert -- $A_{3-x}V_2(PO_4)_3$ -- and delete " $A_3V_2(PO_4)_3$ ".

Column 7, line 24

After " $0.05 \text{ mA}\cdot\text{cm}^{-2}$ ", insert $-(2.1 \text{ mA}\cdot\text{g}^{-1})$ -- and delete " $(0.95 \text{ mA}\cdot\text{g}^{-1})$ ".

Column 9, line 22

Before "anode", insert --metallic-reductant-- and delete "metallic-reductant".

Column 11, line 21

After "cells of the", insert --invention.-- and delete "insertion.".

Column 12, line 5

Before "or the more open", insert -- LiM(PO_4)-- and delete " LiN(PO_4 ,".

Column 12, line 7

Before "for the ordered", insert -- LiM(PO_4 -- and delete " LiN(PO_4 ".

Column 12, line 36

After "site occupancy", insert --and electroneutrality-- and delete "an delectroneutrality".

Column 12, line 44

Insert -- $3 + s - p = x - y + 2 + t + 2q + 3r$ -- and delete " $3 + s - p = x - y + t + 2q + 3r$ ".

Column 12, line 47

Before "and v may vary", insert --r--.

Column 12, line 48

Before "and s may vary", insert --p-- and delete "r".

MAILING ADDRESS OF SENDER (Please do not use customer number below):

910 Louisiana Street
Houston, Texas 77002

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: **Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

**UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION**

Page 4 of 5

PATENT NO. : 6,514,640

APPLICATION NO.: 12/859,865

ISSUE DATE : February 4, 2002

INVENTOR(S) : Armand, et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 13, line 4

After "0.05 mA \cdot cm $^{-2}$ ", insert --(2.1 mA \cdot g $^{-1}$, 1.13 mA \cdot g $^{-1}$, and 0.95 mA \cdot g $^{-1}$, respectively,-- and delete "(0.95 mA g $^{-1}$ and 1.13 mA g $^{-1}$, respectively,".

Column 13, line 6

Before "respectively, where", insert --Li_xFePO₄-- and delete "LiFePO₄".

Column 13, line 6

After "respectively, where", insert --0 ≤ x ≤ 0.5-- and delete "0 ≤ x ≤ 5".

Column 13, line 60

After "as seen in FIGS.", insert --2A-2C)-- and delete "2A-2C??".

Column 14, line 4

After "the pristine olivine structure of", insert --LiM(PO₄)-- and delete "LiN(PO₄)".

Column 14, line 8

Before "and electronic conductivity", insert --diffusivity-- and delete "diffusitivity".

Column 14, line 52

After "to exhibit", insert --phase transition-- and delete "phasetransition".

Column 16, line 6

Before "C. under argon", insert --then 700°-- and delete "the 70020".

Column 16, line 8

Insert --Li_{1.1}Fe_{0.8}Ti_{0.1}P_{0.8}Si_{0.2}O₄-- and delete "Li_{1.1}Fe_{0.8}TiP_{0.8}Si_{0.2}O₄".

MAILING ADDRESS OF SENDER (Please do not use customer number below):

910 Louisiana Street
Houston, Texas 77002

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: **Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

**UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION**

Page 5 of 5

PATENT NO. : 6,514,640

APPLICATION NO.: 12/859,865

ISSUE DATE : February 4, 2002

INVENTOR(S) : Armand, et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 16, line 10

After "in acetonitrile to", insert --Li_{0.1}Fe_{0.8}Ti_{0.1}P_{0.8}Si_{0.2}O₄-- and delete "Li_{0.1}Fe_{0.8}TiP_{0.8}Si_{0.2}O₄".

Column 17, line 4

After "other for", insert --1<x<2-- and delete "1<X<2".

Column 17, line 21

Before "gives a V vs. x curve", insert --Li_{1+x}FeNb(PO₄)₃-- and delete "Li_{1+x}Fenb(PO₄)₃".

Column 17, line 27

Before "at 1.7 V", insert --Nb⁴⁺/Nb³⁺-- and delete "Nb⁴⁺/Nb⁵⁺".

Column 17, line 31

Before "sodium analog", insert --monoclinic-- and delete "monoclinic".

Column 17, line 35

After "for the", insert --rhombohedral-- and delete "rhomobhedral".

Column 17, line 35

Before "(0.95", insert --mA.cm⁻²-- and delete "mA.cmM⁻²".

MAILING ADDRESS OF SENDER (Please do not use customer number below):

910 Louisiana Street
Houston, Texas 77002

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: **Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.